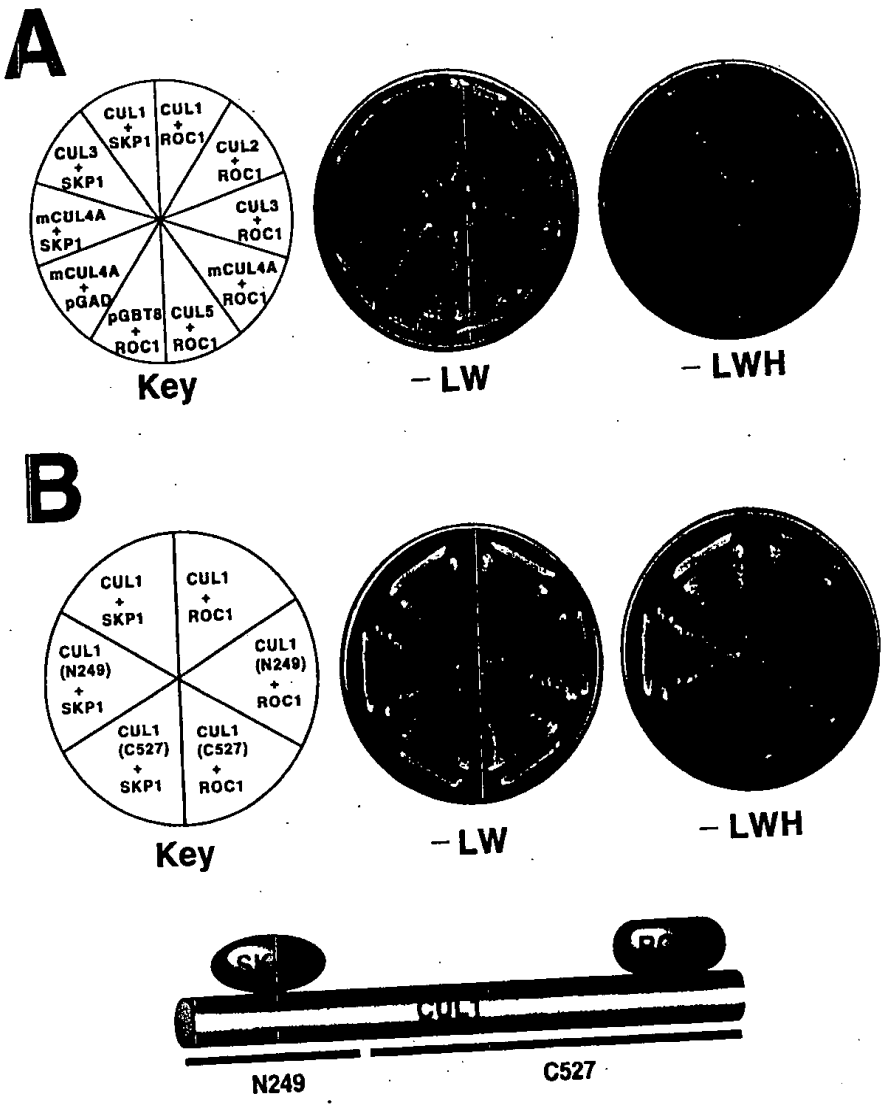

FIGURE 1

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A. ROC1

```
ATGGCGGCAGCGATGGATGTGGATACCCCGAGCGGCACCAACAGCGGCGCGGGCAAGAAGCGCTTTGAAGTGAAAAAGTGGAATGCAGTA   90
 M  A  A  A  M  D  V  D  T  P  S  G  T  N  S  G  A  G  K  K  R  F  E  V  K  K  W  N  A  V     30

GCCCTCTGGGCCTGGGATATTGTGGTTGATAACTGTGCCATCTGCAGGAACCACATTATGGATCTTTGCATAGAATGTCAAGCTAACCAG  180
 A  L  W  A  W  D  I  V  V  D  N  C  A  I  C  R  N  H  I  M  D  L  C  I  E  C  Q  A  N  Q     60

GCGTCCGCTACTTCAGAAGAGTGTACTGTCGCATGGGGAGTCTGTAACCATGCTTTTCACTTCCACTGCATCTCTCGCTGGCTCAAAACA  270
 A  S  A  T  S  E  E  C  T  V  A  W  G  V  C  N  H  A  F  H  F  H  C  I  S  R  W  L  K  T     90

CGACAGGTGTGTCCATTGGACAACAGAGAGTGGGAATTCCAAAAGTATGGGCACTAG 327
 R  Q  V  C  P  L  D  N  R  E  W  E  F  Q  K  Y  G  H  *  108
```

B. ROC2

```
ATGGCCGACGTGGAAGACGGAGAGGAAACCTGCGCCCTGGCCTCTCACTCCGGGAGCTCAGGCTCAACGTCGGGAGGCGACAAGATGTTC   90
 M  A  D  V  E  D  G  E  E  P  C  V  L  S  S  H  S  G  S  A  G  S  K  S  G  G  D  K  M  F     30

TCCCTCAAGAAGTGGAACCcGGTGGCCATGTGGAGCTGGGACGTGGAGTGCGATACGTGCGCCATCTGCAGGGTCCAGGTGATGGATGCC  180
 S  L  K  K  W  N  A  V  A  M  W  S  W  D  V  E  C  D  T  C  A  I  C  R  V  Q  V  M  D  A     60

TGTCTTAGATGTCAAGCTGAAAACAAACAAGAGGACTGTGTTGTGGTCTGGGGAGAATGTAATCATTCCTTCCACAACTGCTGCATGTCC  270
 C  L  R  C  Q  A  E  N  K  Q  E  D  C  V  V  V  W  G  E  C  N  H  S  F  H  N  C  C  M  S     90

CTGTGGGTGAAACAGAACAATCGCTGCCCTCTCTGCCAGCAGGACTGGGTGGTCCAAAGAATCGGCAAATGA  342
 L  W  V  K  Q  N  N  R  C  P  L  C  Q  Q  D  W  V  V  Q  R  I  G  K  *     113
```

C.

```
ROC1-Hs   22 FEVKKWNAVALWAWDIVVDNCAICRNHIMDLCIECQANQASATSEECTVAWGVCNHAFHFHCISRWL---KTRQVCPLDNREWEF 108
ROC1-Dm   22 FEVKKWNAVALWAWDIVVDNCAICRNHIMDLCIECQANQASATSEECTVAWGVCNHAFHFHCISRWL---KTRQVCPLDNREYDF 108
ROC1-Ce   24 FEVKKWSAVALWAWDIQVDNCAICRNHIMDLCIECQANQAAGLKDECTVAWGNCNHAFHFHCISRWL---KTRQVCPLDNREWEF 110
ROC1-At   32 FEIKKWSAVALWAWDIVVDNCAICRNHIMDLCIECQANQASATSEECTVAWGVCNHAFHFHCISRWL---KTRQVCPLDNSEWEF 118
ROC1-Sp   21 FEIKKWNAVALWQWDIVVDNCAICRNHIMDLCIECQANTDSAAAQECTVAWGTCNHAFHFHCISRWL---NTRNVCPLDNREWEF 113
ROC1-Sc   35 FEIKKWTAVAFWSWDIAVDNCAICRNHIMEPCIECQPKAMTDTDNECVAAWGVCNHAFHLHCINKWI---KTRDACPLDNQPWQL 121

ROC2-Hs    2 FSLKKWNAVAMWSWDVECDTCAICRVQVMDACLRCQAEN---KQEDCVVVWGECNHSFHNCCMSLWV---KQNNRCPLCQQDWVV  85
ROC2-Ce   30 FVLKKWNALAVWAWDVECDTCAICRVHLMEECLRCQSEP---SAE-CYVVWGDCNHSFHHCCMTQWI---RQNNRCPLCQKDWVV 112

APC11-Hs   3 VKIKCWNGVATWLWVANDENCGICRMAFNGCCPDCKVPG-----DDCPLVWGQCSHCFHMHCILKWLHAQQVQQHCPMCRQEWKF  84
APC11-Dm   3 VTIKSWTGVATWRWIANDENCGICRMSFESTCPECALPG-----DDCPLVWGVCSHCFHMHCIVKWLNLQPLNKQCPMCRQSWKF  85
APC11-Ce  51 ITVKKLHVCGEWKWL[3]DTCGICRMEFESACNMCKFPG-----DDCPLVLGICRHAFHRHCIDKWI[5]QPRAQCPLCRQDWTI 135
APC11-Sc   3 VKINEVHSVFAWSW[21]DVCGICRASYNGTCPSCKFPG-----DQCPLVIGLCHHNFHDHCIYRWLDTPTSKGLCPMCRQTFQL 165
```

FIG. 2

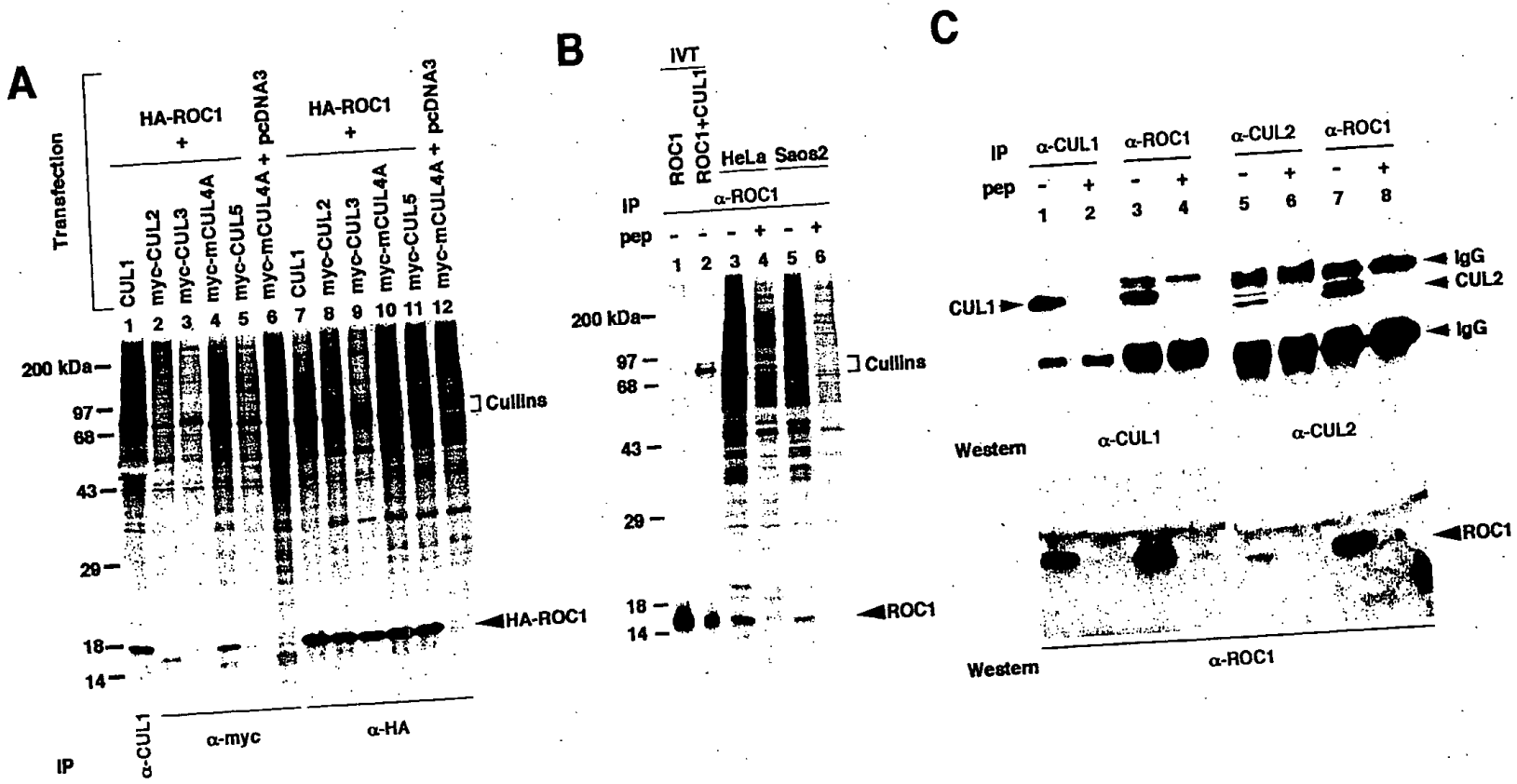

FIGURE 3

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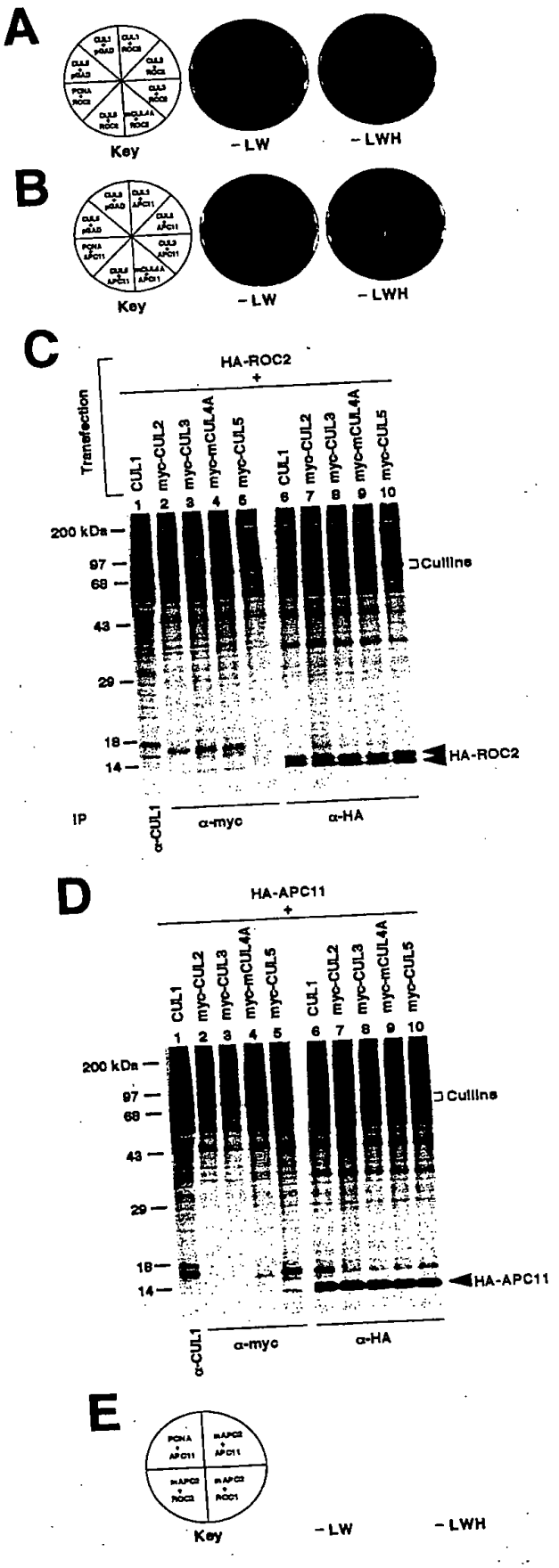
A
Key
-LW
-LWH
B
Key
-LW
-LWH
C
HA-ROC2
+
Transfection
CUL1
myc-CUL2
myc-CUL3
myc-mCUL4A
myc-CUL5
1 2 3 4 5 6 7 8 9 10
200 kDa
97
68
43
29
18
14
Cullins
HA-ROC2
IP
α-CUL1
α-myc
α-HA
D
HA-APC11
+
CUL1
myc-CUL2
myc-CUL3
myc-mCUL4A
myc-CUL5
1 2 3 4 5 6 7 8 9 10
200 kDa
97
68
43
29
18
14
Cullins
HA-APC11
α-CUL1
α-myc
α-HA
E
Key
-LW
-LWH

FIGURE 4

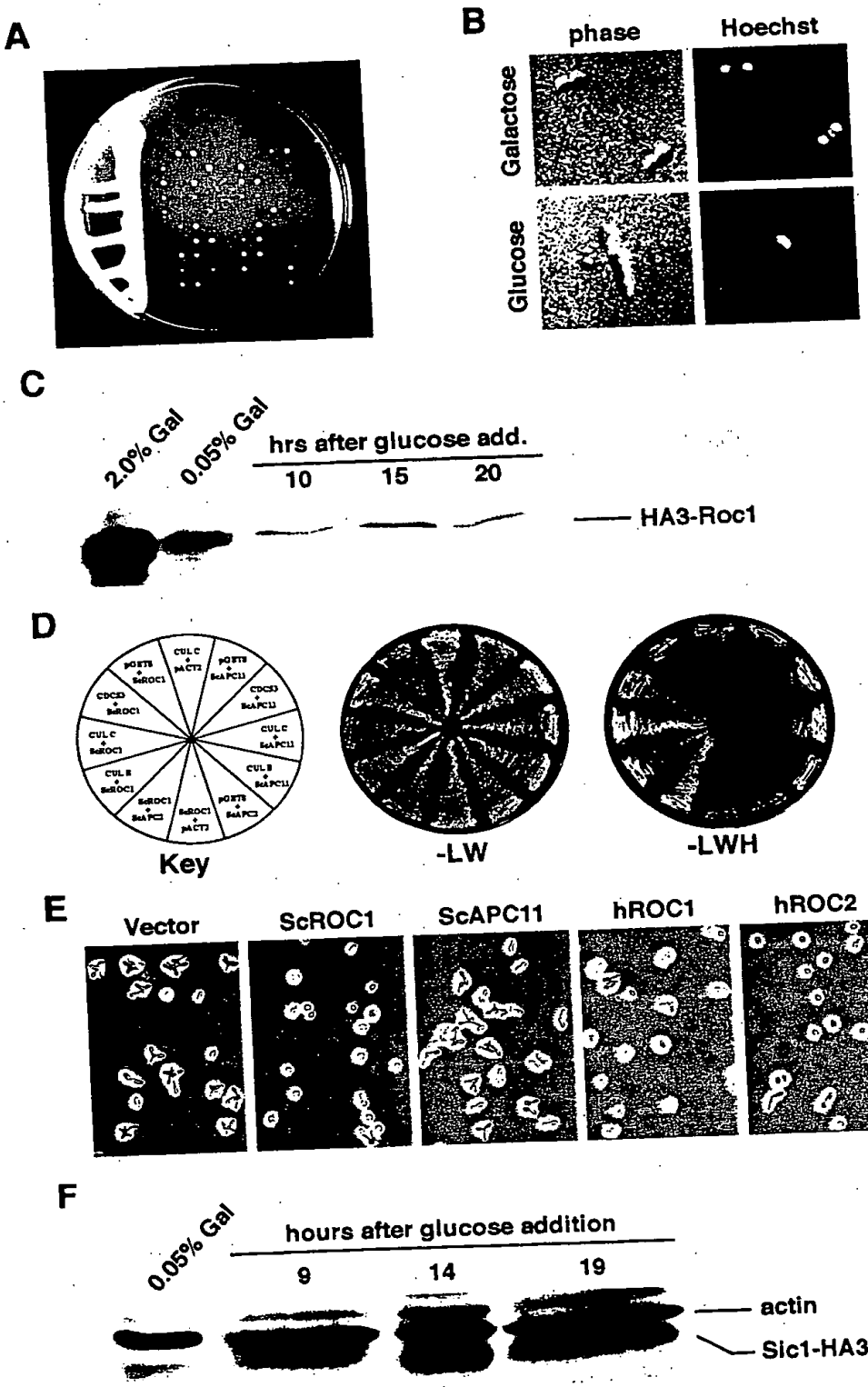
A
B
phase
Hoechst
Galactose
Glucose
C
2.0% Gal
0.05% Gal
hrs after glucose add.
10
15
20
HA3-Roc1
D
Key
-LW
-LWH
E
Vector
ScROC1
ScAPC11
hROC1
hROC2
F
0.05% Gal
hours after glucose addition
9
14
19
actin
Sic1-HA3

FIGURE 5

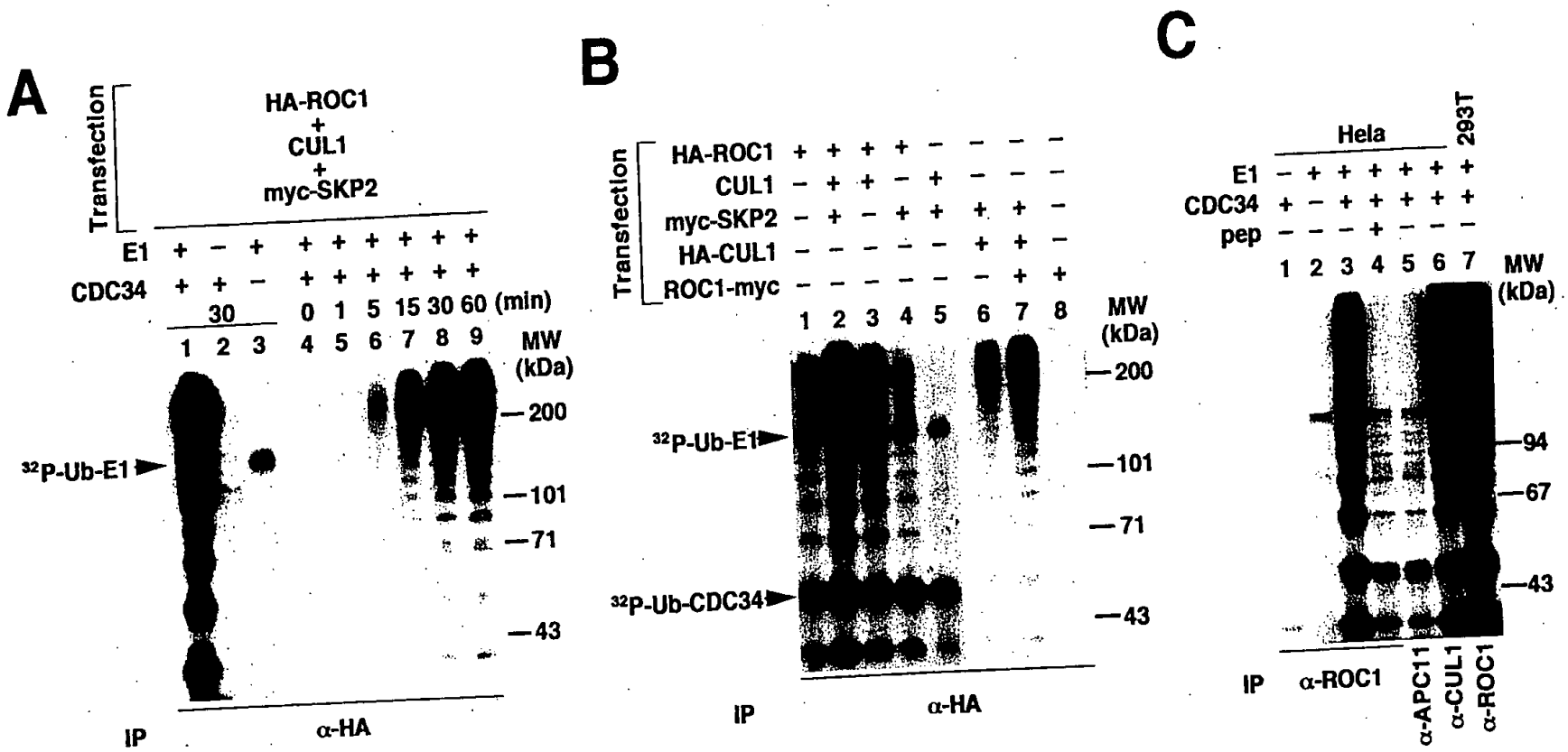

FIGURE 6

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